



THOMAS G. NEWMAN,  
EDITOR.

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## EDITORIAL BUZZINGS.

**The Night** is mother of the day,

The Winter of the Spring,

And ever upon old Decay

The greenest mosses cling.

Behind the cloud the starlight lurks,

Through showers the sunbeams fall;

For God, who loveth all his works,

Has left his Hope with all.—Whittier.

**Hives, Sections, comb foundation,** and everything needed should be obtained at once, ready for use at a moment's notice.

**Some very Sensible Advice** is contained in the following paragraph which is taken from one of our agricultural exchanges:

Keep all colonies strong. Provide abundant bee-pasture. Handle bees carefully and intelligently. Study up bee-keeping thoroughly. Every one should realize how little is really known. Bee-keeping and honey production does not impoverish farms or soil. Bee-keeping can be successfully carried on by women. The best hive is the one you know how to handle best. The best bees are the ones that have best care and feed. Begin small and enlarge cautiously. One or two failures give more real knowledge than three or four successes.

**E. T. Flanagan**, Bellville, Ills., sent us his catalogue for 1888—12 pages—Bees, Supplies, Carp, Seeds, and Small Fruit.

**Attention** is called to the first two excellent paragraphs of Dr. Tinker's article on page 330. That is the only way discussions should be made. And yet, strange to say, since this JOURNAL was ready for the press, we have an abusive letter from a correspondent, for omitting his offensive personalities.

**Nature's Way.**—We have just received a small pamphlet published by E. H. Cook, Andover, Conn., entitled, "G. M. Doolittle's Method of Rearing Queens," which is called "The nearest approach to Nature's way yet devised." It contains 80 small pages, is neatly printed, but poorly bound, and is sold at 15 cents. On the importance of good queens, Mr. Doolittle says:

In no one thing in bee-keeping does good quality count for as much, as it does with the queen or mother-bee. Upon her centers the whole of bee-keeping. It would be impossible to secure a pound of honey without the queen. While a poor queen is better than none, yet it must be patent to all that the better the queen is, the more workers we get; and the more workers we have at the right time the more money we obtain.

When we come to fully realize the great value of a really good queen, one that you can get to lay from 3,000 to 4,000 eggs a day, six or more weeks before the honey-harvest, so as to have our force of laborers when the field is ripe for the harvest, we shall hear of less queens which "cost the apiarist nothing."

Good queens cost something, and are valuable in proportion to the pains taken in rearing them. Hoping that the time is not far distant when all will take more pains in this part of our fascinating pursuit, I thought it might not be a bad idea at this time to give a plain statement of some of the plans I use to procure queens for my own use; always aiming each year to excel anything done in the past. In doing this it shall be my aim to make all as plain as possible, so that even the novice can understand the how and why of it.

Concerning the advantages of the method described, Mr. Doolittle remarks thus:

This mode of preparing the colony so that they will be ready with plenty of prepared queen-food, is ahead of everything I have ever tried. It will be seen that an hour before they were feeding thousands of larvae, and several queen-cells, when, all at once, they are obliged to hold the accumulating chyme, and take on an anxiety for anything to feed as a queen, that is almost as strong as their existence. They are now supplied with from 15 to 20 little larvae, all cradled in queen-cells, upon which they bestow all the provision and caresses they were before doing for a whole hive; and let me assure you if good queens can be reared outside of natural swarming, such queens will hatch out of these cells are the good ones.

It may be obtained at this office at the publisher's price.

**Apicultural Experiments.**—Prof. A. J. Cook, of the Michigan Agricultural College, remarks thus in the *American Apiculturist* concerning his intended experiments:

Under the new Hatch Bill I am going to undertake two new lines of investigation looking to the advancement of bee-keeping. First, I shall select and breed with great care to secure a better bee. I have been at this for some years, using Syrian and Carniolan stock. The other is to experiment to see whether it will pay to plant for bees. If so, what?

**With Rain** plentifully distributed over the country, warm sunshine interspersed between the showers, and profuse fruit bloom with other early blossoms, a good honey harvest may very naturally be expected.

**Many Compliments** have been received concerning the excellent typographical appearance of the AMERICAN BEE JOURNAL since the new volume commenced last January. Much of the credit is due to the exquisite face, finish and general excellence of the body type, which was made expressly for the BEE JOURNAL by Barnhart Brothers & Spindler, manufacturers of the celebrated "Superior copper-mixed type," at their type foundry at 115 and 117 Fifth Avenue, Chicago. We have dealt with this firm for 20 years, and cheerfully commend them to our "brother types," for their business methods are the very essence of integrity and honor, and their make of type excellent and durable. Our "old dress" was made by them, and after using it regularly for seven years, one bee-publisher remarked incidentally that it still appeared so well that he did not see the necessity for our buying new type. This was a very flattering remark to our type foundry and printers.

**The Nebraska State Fair** will be held at Lincoln from Sept. 7 to 14, 1888. There are \$30,000 offered in premiums. Class L. is devoted to bees, honey, and apinary goods, and E. Whitcomb, of Friend, Nebr., is superintendent. Here is the list of premiums in this department:

	1st	2d
	Prize	Prize
Best comb honey, not less than 20 pounds, crated and in single comb sections, weighing not more than 2 lbs. each...	\$10	\$5
Best gallon of extracted honey.....	5	3
The above to be limited to competitors producing their own honey in Nebraska during the year 1888.		
Best colony of bees.....	\$10	\$5
" 20 lbs. of granulated honey.....	5	3
" and largest display by any one, including bees, extracted honey, apinary supplies.....	20	10
The test for colonies shall be the net gain in stores, and will be determined by the weight of honey that can be extracted from the combs of the hive. Each colony shall be weighed, inspected, and sealed at the commencement of the trial, and extracted as above stated at its close. The test of colonies shall end on Wednesday morning of the Fair, and begin on Wednesday morning two weeks previous. No caging of queens will be allowed, or any other practice by which a colony is put out of a normal condition. The bees of each colony shall be the sole progeny of the queen therein, and no colony shall be entitled to compete for a premium not showing, when handled, the ordinary amiability of pure Italians.		
No colony shall be admitted coming from any locality in which there is reason to suspect the presence of foul brood.		
The test for colonies shall end on Tuesday of the State Fair.		
Best exhibit of brood and surplus comb foundation full, to partly drawn.....	\$5	\$3
Best exhibit of apinary implements and supplies.....	10	5
Best display of honey in marketable shape.	5	2
Best candied honey.....	5	3

These premiums amount to \$113 in all. Full particulars, blanks, etc., can be obtained of the superintendent.

**Frank Leslie's Sunday Magazine** for June is a number timely to the season, and two of its articles relate to Lake Champlain. Both are finely and fully illustrated, and they make one long to go thither. Lake George has so long monopolized attention that it is an agreeable change to find Lake Champlain receiving the recognition its beauties merit. Dr. Talmage contributes a capital article on "Woman her own Defense." The shorter articles are numerous as usual, and very interesting. The whole number is valuable.

## GLEAMS OF NEWS.

**Extracted Honey in California** seems to be a non-paying production. The excessive freights when exporting it to Australia and Europe take away all the profits, and the production of the past two years has been at a loss. The San Bernardino *Times* of a late date contains the following characteristic article on the subject, to which we invite attention:

The fact cannot be denied that the bee-keepers of California have for several years past been having a pretty hard time of it. We have seen prices go down gradually, year after year, until now they are so low that there is absolutely no profit in the business, at least so far as the production of the extracted article is concerned. And the decline in price has seemed to have very little reference to the amount produced. Naturally, one would suppose that in seasons of short crops prices would become correspondingly stimulated. But such has not been the case. The price has gradually fallen until 2 or 3 cents a pound is about the limit of the price received by the producer, and one does not need to know that at such absurdly low prices there is no profit for the bee-keeper.

There seems to be some insuperable objection among the majority of people against the use of extracted honey. When that article was first put upon the market it was thought possible, and even probable, that its use might become general, and that so pure and healthful an article would quickly take the place of the impure and adulterated molasses, syrups and "drips" which are so largely consumed. Especially was it thought that this would be done when the price for the pure honey was put at a lower figure than those articles could be sold for. But for some reason it has proven all but hopeless to attempt to persuade people generally to become consumers of honey. As a consequence the price has, as already been stated, reached a very low point, both here and in the East, though it was much longer in getting down there than on the Pacific Coast.

Now, bee-keepers all over the country are seeking some method by which to make their business profitable. Many of the most experienced bee-keepers of the East have decided that there is nothing to be done except to put a stop to the production of extracted honey, and devote their entire time to the comb.

It is now claimed to have been a great mistake to have put the extracted honey at so low a price compared with the comb; but the damage has been done, and it was based upon the idea that the bees could make about 3 pounds of extracted honey to 1 pound of comb honey, and that therefore the relative prices should be about in the same proportion. But this does not work very well in practice, for while extracted honey at 3 cents a pound, no matter in how great quantity it is produced, does not yield a profit, comb honey at 8 to 10 cents pays very well indeed.

As a consequence the advice to stop the production of the extracted article seems to be well founded. It is certainly far better to produce two tons of comb honey that will give a profit of 2 cents a pound, than to produce six tons of the extracted that has to be sold at a loss.

The fact is that the honey-producers of California pushed the sale of their liquid product so extensively that the great markets of the Eastern States were crowded with it, and that brought down the price, not only of California honey but also of that

produced in the Middle and Eastern States. It also glutted the markets to such an extent that the demand for liquid honey was more than met, and sales were exceedingly slow. There was evidently an over-production on the Pacific Coast, with only an ordinary supply and demand in the older States.

Wisdom would seem to dictate that, instead of discouraging the production of extracted honey, bee-keepers should try to find avenues for its consumption. These have been greatly enlarged during the past decade, and may be doubled within the coming few years. Tons upon tons are used every year in the following manner:

It is used in the manufacture of confectionery, cakes and pastry, soda-water, mead and metheglin, jellies and jams, honey-wines and liquors, liquorice, honey egg-foam, and honey-vinegar, medicinal preparations, syrups, ointments and salves, popcorn balls and harvest drinks.

It is also used in canning and preserving fruit in its natural state, curing hams and meat of various kinds.

In making printers' rollers it forms a principal ingredient, also in the manufacture of beer, ale and tobacco, it holds a prominent place.

In making comb foundation it is used considerably.

In compounding medicines of all kinds, it has for ages held an important place; while as an article of food it has been esteemed as one of the principal delicacies for many centuries.

It will be well for all honey-producers to see if they cannot find out *new* avenues for the use of honey. In this way we can prevent a decline in prices when the future honey crops will be large.

The extracting of honey was not a mistake—but it might have been a mistake to put the price at less than that in the comb.

To-day honey out of the comb is retailing in this city at 15 cents per pound, and the demand is very fair. The great error was made years ago by bee-keepers themselves, by lively competition, to break down the prices, and it is very difficult now to boom it, even when the crop is short.

The Inter-State law is just what has killed the honey-production on the Pacific Coast, by increasing the freight tariff so much that it takes all the honey is worth to bring it to the Eastern markets.

But what is disaster to them is a blessing to apiarists in the Middle and Eastern States. By keeping Californian honey out of the latter markets enhances both the price and demand of the Eastern product. This is another illustration of the old adage, that "It is an ill wind that blows no one any good."

**Carniolan Queens.**—S. W. Morrison, M. D., of Oxford, Pa., has sent us a description of them, their progeny, and good qualities, with full directions for introducing them to alien colonies. It will be sent free by him to all inquirers.

**Experiments.**—Mr. C. H. Dibbern, of Milan, Ill., gives these graphic descriptions in the *Plowman* of some of his experiments in "the days of yore:"

While I am writing of experiments, I will say that my ideas have not always proved so successful. Many years ago, when I used surplus boxes holding 30 lbs., without bottoms, I was greatly puzzled as to how I should take them off without getting stung. I did not then understand the best use to make of smoke, and a good smoker was unknown. Often I would pry off the box and then try to blow smoke on the bees from a roll of rags, but often just at the critical time the fire would go out, and the bees would make it so hot for me that I was glad to let them alone, honey and all.

Finally an idea struck me, that if I would take two sheets of tin I could slip it under the box double, and then divide between the sheets, and remove the box of honey by holding on the tin bottom to keep the bees in and leave the other sheet on the hive to keep those in the hive down. This worked very well, till I tried to lift the box off, when the tin warped, letting out a board of infuriated bees, which immediately commenced a tour of conquest up my shirt sleeves, causing me to beat an inglorious retreat to the house. The bees in the main hive were soon "on their ear," as well as those in the box, and it was not till dark that any of us dared to venture out of the house. Even the chickens and dogs had to "climb" when they came too near the hive.

After dark I managed somehow to carry the hive to the cellar, allowing the bees to fly out through an open window afterwards. It was quite awful, however, before I could go anywhere near that colony without them "going for me," and they "bummed" around the house for a week.

Another experiment I tried about the same time was a "new method" of hiving swarms that lit high up on a tall tree. I had such a tree that was the pest of my life. Every time a swarm would issue they would go right for the top branches of that tree, and perhaps before I could secure them 3 or 4 swarms would cluster in the same branch. It took some time to climb the tree, saw off limbs and let down the bees, and it was usually hot and tiresome work. Finally the idea struck me that by getting a light pole some 20 feet long, and nailing on a hook and a muslin bag, I could secure the most of these swarms by giving the branch on which they might hang, a sharp rap with the end of the pole, and catching the bees in my sack, then gently let them down, and shake them into my hive.

How strange I had not thought of that before! Now I fondly imagined that all my trouble, on this point at least, was at an end. A trial of my great invention, however, soon shattered my hopes, when I found that the first rap on the limb with my swarm-catcher landed a half dozen bees inside of my shirt collar, and oh! how hot they felt.

The climax was reached, however, when the weight of the bees brought down the whole affair with a crash, and killing many bees. This made them furious, and the way they "went for me," compelled me to seek shelter in a neighboring shed. Even there they tried to get through knot holes to get at me. It was a long time before I got that colony settled in a hive.

It is needless to say that I have ever since regarded any pole arrangement with suspicion. At any rate a great coolness soon settled over that invention, and I have never since been seen going around the apiary with a long pole with a bag at the end.

**Give a Copy** of "Honey as Food and Medicine" to every one who buys a package of honey. It will sell lots of it.



**That Arkadelphia Case, etc.**—Messrs. Harmon & Skinner, Zenos, Arizona, on April 25, 1888, write :

It was with feelings of joy that we read of that Mayor and aldermen being kicked out of office in Arkadelphia. It should not stop at that, but they should pay Mr. Z. A. Clark the damage and expense to which they have put him. We are ready to help the Bee-Keepers' Union if they need any means. There have been some threats made here lately, of passing a city ordinance to oust the bees from the city limits. We hope there will be no one so unwise and foolish, as to start any such thing here ; but it seems as if there is a craze on the subject of bees. We hope that Mr. Clark will receive full satisfaction.

Our bees are doing well this season. We extracted honey two weeks ago, and took a little over 26 pounds per colony, from 70 colonies. We use the Heddon 8-frame Langstroth hive, and like that size of hive. We have 2 colonies of hybrid bees, from each of which we took 30 gallons of extracted honey in one season. The honey was extracted seven times in the season.

The Bee-Keepers' Union will have use for all the means within reach next July, for it has decided to leave no stone unturned to win the suit against Mr. Clark in Arkadelphia. The very best legal talent has been employed, and every inch of ground will be hotly contested. The ousting of the Mayor and councilmen, and the election of men of reason only guarantees for the future. The suit, having been appealed to the upper court, will have to be fought just the same.

**A Sugar-Producing Tree.**—O. O. Poppleton, of Apartado 278, Havana, Cuba, writes as follows :

On page 164 is a clipping from the *Grocers' Criterion*, about a "Sugar-producing tree in India." Judging from the part of the description about the yield of sugar in the West Indies, the entire thing can be safely judged as being on a par with Wiley's "scientific pleasantry"—in plain English, as a regular, old-fashioned lie.

I have taken some trouble to ascertain what the average yield of sugar is here in Cuba, and I am told by those in a position to be well posted, that new land will yield from 6,000 to 6,300 pounds per acre ; and old land from 3,600 to 4,000 pounds, instead of only 400 pounds per 1¼ acres, as the *Criterion* has it.

Importers in Havana pay planters from 2 to 3 cents per pound for sugar delivered in the city ; so the reported yield of but little over 300 pounds per acre, would not begin to pay for seed and rent of land, saying nothing about the immense expense for labor and machinery. I wish there was some way that Cuban sugar could be placed on the American retail market, without its passing through any process in getting there. It would largely replace other grades of sugar, on account of its great richness and absolute purity.

The selection was sent to us by Mr. Lewis Proxmire, of Mount Union, Pa., and he cut it out of the *Grocers' Criterion*. In reply to his question, we replied that we knew nothing more of the tree described than was contained in the article, and our thanks are tendered to Mr. O. O. Poppleton, who is now in Cuba, for stating his opinion of the article. It seems it is another of those disgusting lies which are perpetrated as "scientific pleasantries !"

**Chapman Honey-Plant Seed, etc.**—Leroy Highbarger, Leaf River, Ills., on April 27, 1888, writes :

In reply to Mr. A. Fiddes' request on page 275, I would say that I have received a package of the Chapman honey-plant seed, through our Congressman. When I wrote him to get it for me, he replied by return mail, that he would attend to it, and so it came right along. Whenever I want seeds from the Agricultural Department at Washington, by writing to him I get them. I shall not plant the seed, as it is not a hardy plant, and will not stand the winters in northern Illinois. I raised about 400 plants last year, and to-day I have between 40 and 50 left. What I did save were under a snow-drift until April 1. Every plant that was not protected is dead. If any others raised plants from it last season, I should like to hear from them, and how they have wintered.

Wintering bees last winter in this (Ogle) county was a failure. I have taken considerable pains in investigating, and I find a loss of at least 50 per cent., from that great scourge—diarrhea. The colonies to which I had fed sugar syrup fared fully as badly as those that had natural stores.

John B. Lindie, of Muscatine, Iowa, on April 28, 1888, answers the same question thus :

I have received some of the Chapman honey-plant seed, and it was planted a month ago ; it is up, and has been cultivated once. There would be less complaints if orders were sent early, and not expecting it sent by return mail. I do not know what force of clerks are kept in the Commissioner's office, but it would require thousands to fill all orders on such short notice.

Among others who also report the receipt of this seed are C. W. M. Burroughs, Hillsborough, N. J., who got twice as much as he needed, and liberally divided with a neighboring apiarist. F. Wilcox, Mauston, Wis. ; L. B. Gilmore, Blooming Valley, Pa. ; G. H. Kniekerbocker, Pine Plains, N. Y., etc.

Mr. Fiddes complained of not receiving his seed, and intimated that none may have been sent out. It is pleasing to know that "our public servants" at Washington have done their duty in this matter, and as Mr. Fiddes did not receive his, it is pretty evident that his letter was lost, or the seed miscarried. We are very glad that the question was asked, and answered so satisfactorily and numerously.

**Removing Bees from the Cellar.**

—B. T. Davenport, Auroraville, Wis., on April 28, 1888, writes :

I took the first of my bees from the cellar on April 24, about two weeks later than they have remained in the cellar for 13 years. It was too cold prior to that time to take them out. The weather turned very warm on April 25, and I noticed the first pollen. The following day was fairly hot, the mercury reaching 82° in the shade, which brought willows out very rapidly ; and on the two following days, bees gathered honey as fast from that source as I ever saw them gather it from clover. But to-day their work is stopped by a cold, northeastern rain-storm.

My 112 colonies were put into the cellar the last of November, 1887, making their confinement five months. They have wintered quite poorly, and I think I shall lose one-third or more, depending upon the weather from now on.

I have learned one of the best and most practical lessons since I have been engaged

in bee-keeping. It reminds me of a passage of scripture, "Ever learning, and never able to come to a knowledge of the truth." I carried out a great many colonies during the middle of the day, on two days, while the mercury was 82° in the shade, and they mixed up very badly, all pouring upon two other hives until they were covered, and strong colonies were almost entirely depopulated ; while those that I carried out after dark, and on the first two days while it was cool, came out slowly, marked their location, and returned to their respective hives. This was my first experience in putting out bees during such hot weather ; and of late years I have neglected to number the hives, so that they are not placed on the old stand, and I never had any trouble of this kind before.

Numbering the hives is a very important item when cellar-wintering is practiced, so that they may be placed on the same stands occupied during the previous season. The old bees cannot be spared thus early without materially interfering with the season's operations ; and there is danger of their being lost by entering the wrong hives.

## INTERROGATORIES.

**Wax Secretion—Moldy Combs.**—J. B., of Ohio, asks the following questions :

1. Is the secretion of wax voluntary, or an involuntary act with bees ?
2. I have a great many frames of empty combs, and some of it is pretty moldy. What would be the best way to use them ? Would it be best to hive swarms on them, make nuclei and use them, or render them into beeswax, and have foundation made from it ?

1. We do not know whether it is always voluntary or not ; but we think that it is, as a rule.

2. If the combs are otherwise good, put them into or over strong colonies, which will soon clean them. Do not hive swarms on them, nor give them to nuclei.

**Sprinkling Swarms in Trees.**—Mrs. Jas. S. Stapler, of Tahlequah, Indian Territory, asks :

Is there any arrangement by which a lady could sprinkle bees that have settled in the top of a tree, in case where one has to wait for a man to hive them ? Or, are there any other means of retaining the bees ?

Yes, the Whitman fountain pump is the best thing that we have used. With it you can hold a swarm in cluster for an indefinite length of time, by sprinkling them often—every 10 or 15 minutes if the air is hot and dry. Be careful not to administer so much water at any one time as to break down the cluster. Experience will teach you.

**New Catalogues for 1888** are on our desk, from the following persons :

Geo. H. Kniekerbocker, Pine Plains, N. Y.—20 pages—Queens and Bees.

M. E. Mason, Andover, O.—8 pages—Bee-Keepers' Supplies.

## QUERIES & REPLIES.

### Good Location for Successful Bee-Keeping.

Written for the American Bee Journal

**Query 542.**—Given, the latitude of Cincinnati creek and river bottoms, with clay hills as high as 200 feet, country well-farmed, white clover the principal source of honey, many lawns and much fruit-bloom, some mellilot in the bottoms, and golden-rod and aster on the hills (no buckwheat and no basswood), and a good market. Would one who is qualified and loves the work, be apt to succeed as a specialist in the production of honey?—Southern Ohio.

Yes.—M. MAHIN.

Yes.—C. C. MILLER.

I think that he would.—MRS. L. HARRISON.

Yes, if he is *qualified*.—R. L. TAYLOR.

He would be apt to succeed.—J. P. H. BROWN.

Yes. We are in just such a country.—DADANT & SON.

I have no doubt that the locality would be a good one.—P. L. VIALLO.

Most assuredly, if all you state be true.—J. M. HAMBAUGH.

I can see no reason why he could not.—G. M. DOOLITTLE.

Others have done so, and there is no reason why you should not.—J. E. POND.

I think that such a locality will average with the honey-producing States.—EUGENE SECOR.

I think so. If basswood could be added, it would be very desirable.—A. J. COOK.

Yes, if there is plenty of clover, and it yields plenty of honey. As it was here (northwestern Ohio) last season, the bees would starve.—A. B. MASON.

There are points along the rich river bottoms near Cincinnati where a specialist should succeed well.—G. L. TINKER.

I should be a little afraid of your location, but if you have plenty of nectar for the bees, you will succeed if you have the necessary qualification, and love the work.—H. D. CUTTING.

This depends upon many things, and is a difficult question to answer. If the person has a love for the business, is industrious and economical, and has ordinary business ability, he would probably succeed.—C. H. DIBBERN.

I rather think so. But I would sow sweet clover and pleurisy-root as I had opportunity, and coax the farmers to sow Alsike clover. I sowed, three years ago, 40 acres of mammoth or peavine clover, and the bees frequent it as much as any plant I ever saw.—J. M. SHUCK.

I should call the location a fairly good one. It is a rare thing that any location combines all the desirable qualities in one. I would not fear to undertake it, if I was looking for a location, and other things suited me.—G. W. DEMAREE.

Yes; such a location and such a person as is described should make a success of bee-keeping.—THE EDITOR.

### Marking the Hive of a Mating Queen.

Written for the American Bee Journal

**Query 543.**—The hives front east, are 4½ feet apart from centre to centre in the rows, and the rows are 8½ feet apart. If you find a queenless colony, and have no fertile queen to give it, but must give a caged cell or virgin queen, would you give the colony a new location, so as to give it more room in order that the queen returning from her mating-trip may be sure to enter her own hive?—Apliarist.

No.—M. MAHIN.

No.—A. J. COOK.

No.—A. B. MASON.

No, I should take the risk.—R. L. TAYLOR.

No; the distance is as far as needed.—P. L. VIALLO.

No. I would lay down a wide board in front of the hive, or in some other way make it look a little different from the others, when you should have no trouble.—G. M. DOOLITTLE.

I would not. There is very little risk of the queen mistaking her own hive.—MRS. L. HARRISON.

If you want to incur no risks, it would be better to remove the hives for the time being, to a new location not crowded.—J. P. H. BROWN.

No, but I would move the hives together in pairs, and thus double the chance of the young queen finding the right hive.—C. C. MILLER.

I should not change the location at all. The chance of losing the queen is so small that the trouble of so doing will not pay.—J. E. POND.

No. Lean a board or some other prominent object against the hive, about the time the queen will hatch, to make it easily distinguishable from the others.—EUGENE SECOR.

Place a twig of green leaves either side of the entrance, and the young queen will not miss her hive.—G. L. TINKER.

I would let the hive stand right where it is. Entering the wrong hive is not what causes losses in the mating of young queens. I have spent hours, days and weeks in observing these matters, and no young queen ever makes the mistake of entering the wrong hive unless two young queens chance to fly at the same time from

the adjoining hives. Young queens return home guided by the signal "hung out" by her own bees. The loss is caused by the unaccountable disposition of the bees to "ball" their young queens.—G. W. DEMAREE.

By no means; but place some marks about the hive entirely different from any in the yard, that she may not fail to know on her return from her mating trip.—J. M. HAMBAUGH.

No. It is well to place a wide board on each side of the hive, projecting a foot in front, to enable such a queen in finding the right hive, they otherwise being similar.—C. H. DIBBERN.

No, she will be very apt to get home all right. The best plan to aid her is to place something over or against her hive, that plainly designates it from all others. Do not move it.—JAMES HEDDON.

No; but I would put an old carpet or an old coat over the hive for several days, and the queen will find the right hive, as far as location is concerned.—H. D. CUTTING.

It is not necessary to change the hive. Mark it in some way so that the returning queen will distinguish it from the others. Lean a board against the front of the hive, or lay a brick or an old shoe on the alighting-board; dozens of ways may be thought of, and all would be good.—J. M. SHUCK.

No. It is unnecessary to move the hive; but it might be well to place a bush or board slanting over the entrance, or something that would be a distinguishing object on the top of the hive.—THE EDITOR.

### CONVENTION NOTICES.

The next meeting of the N. W. Ills. and S. W. Wis. Bee-Keepers' Association will be held in Rockton, Ills., May 22, 1888. D. A. FULLER, Sec.

The spring meeting of the Wisconsin Lake Shore Center Bee-Keepers' Association will be held on May 31, 1888, in Mueller's Hall, at Kiel, Wis. FERD. ZASTROW, Sec.

The Hardin County Bee-Keepers' Association will meet at the Court House in Eldora, Iowa, on the second Saturday in each month, at noon (12 o'clock), until further notice. J. W. BUCHANAN, Sec.

The Linwood Bee-Keepers' Association will meet at Eau Claire, Dunn Co., Wis., at 10 a.m., on Friday, May 18, 1888. A fine programme has been arranged, and an excellent time is promised. All are cordially invited. B. J. THOMPSON, Sec.

**Always Mention** your Post-Office, County and State when writing to this office. No matter where you may happen to be for the hour when actually writing—never mention anything but your permanent address. To do otherwise leads to confusion, unless you desire your address changed. In that case state the old as well as the new address.

**Scatter the Leaflets.**—Look at the list (with prices) on the second page.



## CORRESPONDENCE.

## CHARMING MAY.

Written for the American Bee Journal  
BY J. F. LATHAM.

All nature halls bright, bonny May!  
A new-born verdure crowns the spray,  
Bursting buds, and springing flowers;  
Balmey zephyrs, gentle showers,  
Following in the merry train  
Of the feathered songsters' strain.

The busy bee, with joyous hum,  
Revels amid the willows' bloom,  
Culling with care the choicest food,  
Home bears it to her growing brood;  
While perched aloft, with sportive lay,  
Red red-breast chants the charms of May.

The blue-bird, too, on listless wing,  
Lends, by its note, a charm to spring;  
From thicket dense, th' alluring spell  
Responds t' the music in the dell  
With countless throats, in sweet refrain,  
A prelude of the summer's reign.

With heedless dash, the foaming rills,  
In restless leaps, rush down the hills,  
Or, babbling through the meadow wide,  
To broader channels yield their tide,  
And seem to lend, as zephyrs play  
In glist'ning sheen, a charm to May.

At morn and eve the blushing clouds,  
No longer frown on winter's shrouds;  
The vernal sun, with smiling grace,  
Betokens smiles from Nature's face  
In countless hues, on wood and plain,  
Proclaiming—Spring has come again.  
West Cumberland, Me.

## BROOD-CHAMBERS.

## How I Arrived at the Size of the Brood-Chamber I Use.

Written for the American Bee Journal  
BY G. M. DOOLITTLE.

Seeing that some still prefer a large brood-chamber, and seem to think that those who prefer a smaller one are just a little "off the track," a few words about how I was led to adopt the smaller brood-chamber might not be amiss, especially to those just starting in the business of bee-keeping.

When I first began to keep bees, all the old bee-keepers about me kept them in hives of 2,000 to 2,200 cubic inches; and knowing that both Langstroth and Quinby also recommended that size to secure the best results, and as I knew naught of the business, I supposed, of course, that they were correct; so I started out with the standard Langstroth hive with a capacity of 2,200 cubic inches in the brood-chamber, and surplus room on top for about 35 pounds of honey.

After using this hive for two seasons, I became convinced that the square form of frame was better adapted to this latitude than the shal-

low Langstroth frame, and so I adopted the Gallup form of the Langstroth frame, which is 10½x10½ inches square, inside measure. As Gallup used 12 frames, giving about the same sized brood-chamber as Langstroth, I thought that I must, so I started out with 12 frames in each hive. I soon found, however, that as a rule three of the 12 frames would be filled with nice white honey early in the season, and generally remained in the hive the next spring.

After a little thought on the subject, I concluded to place three blanks or division-boards in the place of three frames, two on one end of the hive, and one on the other. To this end I nailed top-bars of frames on boards which were short, the depth of the hive, one-half of an inch at the bottom, and hung them on the rabbets in the place of the three frames.

I had previously found that my best queens would only occupy about 800 square inches of comb with brood, which left about 600 square inches of comb to be filled with honey and pollen, and my hive of 2,200 cubic inches gave me about 1,400 square inches of comb, surface measure. Thus each year I was losing the use of 25 pounds of the choicest honey, for the sake of insuring that the bees had abundance of honey for winter. This honey, placed in boxes, was worth \$5 at least, at the time, while if necessary to feed on account of a smaller brood-chamber, \$2 worth of sugar made into a syrup would provide them as much feed as the \$5 worth of honey would supply.

I tried about 10 colonies with the three boards in the place of three frames of comb, thinking it best not to go contrary to the old veterans on a large scale at first, fearing that they might be right after all. However, I was more than gratified to find that I not only obtained the 25 pounds in boxes, but that these 10 colonies averaged about 50 pounds more honey than those that had their 12 frames of comb. The reason soon became obvious why this was so. As the queen kept the nine frames nearly filled with brood, when the honey harvest came the bees had nowhere to put the honey which they gathered, except in the boxes, so they immediately commenced work in them. With the 12 frames of comb they had room to store quite a quantity of honey in comb already built, and so they were loth to go into the boxes, as they had made their first start below.

Another thing pleased me much, which was this: I found as cold weather approached in the fall, that the bees placed their fall or dark honey in the brood-chamber, as the

queen decreased laying preparatory for winter, and that as a rule the 10 colonies had enough honey for winter, namely, 25 pounds, and as this was not so salable as the white honey, I had made a great gain here also. The next year I placed boards in many more of my hives with like success, and the year after found me with all of my hives having only nine frames in them.

Having established the size of the brood-chamber (as nine Gallup frames) to my satisfaction, I found that unless I used the boards in the new hives that I made, I should not have room enough for boxes (60 pounds capacity being about right) on top of the hive. This set me to thinking of side boxes in connection with the top boxes, and I soon had the hive I have so many times described in the AMERICAN BEE JOURNAL.

These hives give me better results than any before obtained, and I was so well pleased with them that I adopted them altogether when working for comb honey. In 1877 the colonies in them gave me the average yield of over two hundred pounds of comb honey each.

For a few years I was satisfied, and each year gave me good results, but I soon saw that if I was to secure the greatest possible results obtainable, I must stop the rearing of too large a force of bees in the honey harvest, which not only took much of the honey while they were in the larval form, but became useless consumers when hatched, after the honey harvest was over.

To this end I commenced to contract those 9-frame hives to but 5 or 6 frames when hiving swarms, and also the parent colony as soon as the young queen began laying, where they were held until the honey harvest began drawing to a close, so that the queen which now began to cease her extra prolificness did not wish to occupy more room with brood; when the full complement of combs was again given in time to have their winter stores placed in them from the fall blooming flowers.

In the above way I have secured very gratifying results, and I would no more think of returning to a hive of from 2,000 to 2,200 cubic inches, than I would to the box-hives of our forefathers.

While I prefer the Gallup brood-frame to any other, I should not advise any one that had from 30 colonies upward, to change frames, for any of the frames now in use can be so worked as to secure good results, on the plan of small brood-chambers as above given.

Borodino, N. Y.

## BEES IN WINTER.

### Bees Flying in the Sunshine— Syrian Bees.

*Written for the American Bee Journal*  
BY REV. M. MAHIN, D. D.

In the AMERICAN BEE JOURNAL of April 18, 1888, there are several things upon which I wish to offer a few thoughts and suggestions. The first is,

#### Bees Flying in the Sunshine.

I have been keeping bees for 19 years, and have always wintered them on the summer stands, because I have had no suitable cellar or repository in which to winter them. I have had them facing all points of the compass, sheltered and unsheltered, shaded and unshaded; and while I have kept no accurate statistics, the general results are pretty well fixed in my mind.

In some winters there has been but little difference in the condition of the bees in hives differently situated, and in others the difference has been marked. In winters in which the losses were great, those colonies have uniformly wintered best which were most fully exposed to the sunshine, and that fronted south. Sometimes a few bees will venture out when the temperature is too low for them to return; but generally they are diseased, and would die in the hives if they did not come out; and it is better for the colony that they perish on the snow than in the hive.

Careful observation has satisfied me that, as a rule, healthy bees will not leave the hives when the temperature is so low that they cannot return in safety; and I am satisfied that I have had colonies benefitted by flying when the temperature was considerably below 50°.

I wish also to speak concerning

#### Syrian Bees, their Temper, etc.

For six years or more I have kept Syrians and Italians in the same yard, in the same kind of hives, and with the same treatment; and part of the time in nearly equal numbers. I have had some Syrian colonies that were not good honey-gatherers, just as it has been with Italians; but every season I have found the rule to be, that the Syrians had the most honey. They have proved themselves superior both for comb and extracted honey.

Something needs to be said in regard to their temper. This is a question to which I have given careful attention, and my conclusions are that, as a rule—there are exceptions of course—they are more gentle, and easily handled, when honey is coming in plentifully, than are Italians, but more difficult to manage during a

honey-dearth. They will not bear much smoke. A little is an advantage, but if they are heavily dosed with it, they become so angry as to be unmanageable, and to subdue an angry colony with smoke is impossible. They require gentle treatment when the hive is first opened, and then they may be handled as easily as any bees. I have taken all the combs out of a full colony, and put them back again, without using a particle of smoke, and without a bee getting angry.

I have never had the least trouble with them when they swarmed. No bees are more gentle in swarming time. On the whole, I like and prefer the Syrians.

#### Prospects for the Season.

As far as I know, bees that had honey enough have wintered very well, and are in good condition. They will be, unless we have a very heavy frost, an unusually abundant fruit-bloom, which will give the bees a good start. But in this vicinity the white clover will be a failure. I do not remember ever to have seen it so badly frozen out. At New Castle, where all of my bees are except 2 colonies, the white clover does not seem to be damaged much; and there, and perhaps in the central and southern part of the State generally, the prospect is good for a large honey crop.

Bluffton, Ind., April 19, 1888.

## PACKING BEES.

### The Winter Preparation of Bees.

*Written for the American Bee Journal*  
BY JNO. A. BUCHANAN.

When I wrote on page 788 of the AMERICAN BEE JOURNAL for 1887, stating that bee-masters of this State do not, for the most part, think that it pays in this latitude to pack bees for winter, or make and use chaff hives, I knew that the statement would draw some comments. The first was from Mr. Rau, on page 11.

He thinks that we have made an "astonishing revelation," and suggests that a house well lathed and plastered would be warmer than it would be without such lining. We will agree on that point, but let us go further and suppose that we had a colony of bees with their combs built to the ceiling in one corner of the plastered room, and another colony so situated in a room with only the siding of the building between the bees and the elements, which would winter best? I firmly believe that the bees with their combs built against the siding, where the sun would so often warm, cheer, and in-

vigorate them, would winter best. How often have we seen reports of colonies of bees being located in a building between the plastering and the siding, where for years they have lived and flourished!

Some years ago my bees had swarmed so much that I ran short of hives to put them in. One day three large swarms clustered together. After looking at their mighty proportions awhile, I concluded to experiment on them, so I got a board 2 feet square, nailed cleats 3 inches wide around it, put a stout staple in each corner, tied ropes to the affair, and hung it to a cross-beam in an old wagon-house, with one edge resting against the weather boarding in which were openings of half an inch, by shrinkage. Before putting this board up, strips of comb the full width of it were waxed to underside, as guides, running towards the openings in the siding. The big swarm was brought on, and made to cluster on the starters.

The bees went to work with a hearty good-will, and although late in the season, the center combs were built down as much as 3 feet, and contained a great abundance of honey for winter. Here we had a veritable curiosity, a powerful colony of bees without a hive, save the old wagon-house, which was about as cold in winter as out-doors.

"What will you do with them in the winter?" was asked by many. "Leave them there," was the reply.

"Will they live there?" I replied, "That is just what I wish to find out."

To my surprise this was as strong a colony at the time of apple bloom in May, as there was in any of my chaff hives.

Many times when there was zero weather during that winter, I would at night take a light out, and by holding it so that the rays would pass up between the combs, the bees could be seen clustered just as any one has seen them through the glass in a hive.

These bees, with the combs, were transferred during fruit-bloom the next spring. There was comb enough to fill 21 Langstroth frames.

Now I just relate this experiment to show that bees are not such tender, frail little creatures as some would have us believe they are. We all have seen bees wintering in boxes or hives so cracked and open as to expose the bees to view all the winter, and yet they would come out in the spring in the very best condition. But though all these things have been seen by hundreds of close observing bee-keepers, in almost every State in the Union, they may be, to Mr. Rau, "astonishing revelations."



When I say that I have kept nearly 100 colonies of bees for 30 years, and for the last 15 years one-half of that number; and that they have been wintered in good chaff hives without showing any better record as to swarms and honey than those kept in single-walled hives, it may seem to be a still greater "revelation" to Mr. Rau. Were I constructing a thousand hives for my own use, they would be made of 1-inch lumber, square joints, with sectional or half-depth upper-stories adapted to the tiering system, either for comb or extracted honey.

Mr. R. says that he wants the "brood-chamber contracted for winter, and 3 or 4 inches of packing on the outside of the hive." I have no patience at all with this idea of packing to be put outside the hive. If we find a colony in the fall that is not strong in bees, it is well to contract with division-boards, filling between these and the hive-walls with chaff or other good material; and over all place a quilt and cushion. This protection is easily put in place, easily removed when not needed, and the hives so arranged are not cumbersome and unsightly. When spring comes, the packing on the south side of the hives should be removed, the combs moved to that side, and the packing all put on the north side. This places the cluster where it receives the benefit of the warmth from the sun, with all its life-giving and exhilarating influence.

As brood-rearing closes in the fall, we find that the bees generate but little heat, which grows less perceptible during the fall and early winter, until the approach of the breeding season, when there is a gradual increase of warmth, which reaches its greatest intensity at the height of brood-rearing. Now, it is during the cool months of spring that contracted brood-chambers and packing may serve a good purpose, where there are not bees enough to form a heat-retaining crust around a good-sized brood-nest.

As cold weather comes on, bees are wont to form themselves into a cluster and enter a semi-quiescent state where, if undisturbed and in a normal condition, they rest and grow no older. In this condition respiration and the vital forces are measurably suspended. This is the bidding of nature's laws. But here comes our tender-hearted bee-keeper, and wraps his pets so warmly that they scarcely cluster at all, but rattle about and wear themselves out prematurely, instead of sleeping the sleep of peaceful rest. Bees in this State are wintered without any loss worth mentioning in single-walled hives, and why should we trouble our-

selves with cumbersome double-walled hives.

I believe there is a possibility of a system being discovered in the near future, by which bees may be safely wintered with but little or no consumption of food, as in the manner of hibernating ants. Many things are possible in this age. In the meantime, hold to your packing, Mr. Rau.

Holliday's Cove, W. Va.

## EASTERN BEES.

### Characteristics of Cyprian and Carniolan Bees.

Written for the British Bee Journal  
BY FRANK BENTON.

From Great Britain and from America letters similar to the following have so often been received by me that I deem the answers of sufficient general interest to warrant their publication on both sides of the Atlantic. They are given in accordance with my experience and honest convictions:

DEAR SIR:—1. Are the Carniolan bees as good honey gatherers as the Cyprians?

2. Will they at all times defend their hives?

3. Are the queens as prolific as the Cyprian and Syrian queens?

4. Do you consider them as well a defined strain or race as the Cyprians? The Cyprians, according to my experience, are a far better defined race than the Italians. When crossed, their markings are transmitted much further. I am inclined to give the Germans the next place. I have experimented with the German, Italian and Cyprian races.

5. How do the Carniolans winter in confinement?

JOHN W. GROUP.

ANSWERS.—1. No; but they are good both as honey gatherers and comb builders, and they seal their honey in such a manner that the combs look whiter than those sealed by Cyprians, Syrians, Palestines or Italians.

2. No. If made queenless, they are thrown into greater excitement than are other bees under the same circumstances, and if deprived of their brood at the same time, are frequently so disconcerted as to neglect, for the time being, the defence of their hives. At other times, that is, under ordinary circumstances, they are most excellent defenders of their hives.

Carniolan queens are not, as a rule, as prolific as Cyprian and Syrian queens, but are far more prolific than black or Italian queens. The best Carniolan queens do not fall far short of Eastern queens as regards prolificness.

I do not. Mr. Group is quite right in saying that "the Cyprians are a far better defined race than the Italians, and when crossed their markings are transmitted much further?" And the

same thing is true of Cyprians, as compared with Carniolans or any other known race. Cyprians are the "thorough-breds" among bees—the only ones whose pedigrees are pure, and their long line of ancestors bred in pent-up Cyprus, under conditions that must necessarily have produced a wonderful race of bees, reproduces its individuals to our admiring and covetous gaze—admiring because these bees transmit their markings and great beauty; and covetous, because they transmit also, even should their pure blood be adulterated by several generations of cross-breeding, their wonderful energy in collecting honey.

Among European races of bees, Carniolans, according to my experience, are, in all points of importance, decidedly superior, no matter whether we consider their qualities as honey collectors, or their ability, if their working force be so directed, to increase rapidly; their readiness to enter surplus receptacles and ability to build and seal over snow-white combs; their gentleness of disposition—their quietness under manipulation, and inclination to adhere to the combs, yet the comparative ease with which they can be brushed or shaken off; their ready defense of their hives under all ordinary circumstances, both against moths and robber bees; their quiet submission when confined for shipment; their readiness in constructing numerous queen-cells; the great prolificness of their queens; the indisposition the workers show towards gathering propolis to daub up sections and glue frames solid; the greater size and individual strength of the workers; their ready submission upon the application of smoke, if perchance they may have been aroused by rough manipulation; their disinclination to attack any one who merely enters the apiary; their hardihood, enabling them to withstand the severest climates, and their quietness and compactness in their winter clusters making them remarkably good winterers; if we test them in regard to any of these points, side by side with any other commonly cultivated European race of bees, all must yield the palm to the "silver race" of Carniola.

Mr. Samuel Simmins, in his excellent work, "A Modern Bee-Farm," tells the whole story in one sentence, when he says of Carniolans, "Scarcely a fault can be found with them."

5. Excellently. They have been developed in a cold, mountainous region, where snows are deep in winter, and rains often prolonged and even cold during the summer season. The past winter bees have been confined here without a good flight for four months continuously. Snow has been over two feet deep in the open coun-

try, while mountain ravines are drifted full. The thermometer several times indicated 13° Fahr., below zero. Very possibly this question is meant to refer to wintering in cellars or special repositories. In Carniola, bees are not wintered in cellars, so far as I know. The native bee-keepers pack their shallow box-hives (which are 6 to 8 inches deep, 12 to 18 inches wide, and about 3 feet long) side by side, and one above another, in old-fashioned bee-houses or sheds, and surround them with moss or fine hay, letting a mat or trap-door close the front during the intense cold, or when the ground is covered with light snow and the sun is bright. In this sort of repository, with abundant stores, colonies winter well.

Upper Carniola, Austria.

## DISCUSSION.

### Hard Arguments, but Pleasant Words the Most Effectual.

Written for the American Bee Journal  
DR. G. L. TINKER.

The readers of the BEE JOURNAL will have seen that I have had little to say in reply to attacks upon me concerning my essay at the Ohio convention on hives. Now I desire to say that no angry communications to our bee-periodicals can be of any possible benefit to bee-keepers, and furthermore they should not be tolerated. For a long time there has been general good-will manifest among bee-keepers everywhere, and all differences of opinion have been tolerated in a fraternal spirit, and I desire to see this state of things continue. Until bee-keeping is reduced to a perfect art and science, differences will exist, and they should be tolerated in a proper spirit.

All will heartily concur with the editor in his remarks on page 260, that all "quarrelsome and jealous persons are not up to the spirit of the times." How very true this remark is, every well informed person of the present day must know. Angry contention never has, nor never will help any cause, but honorable and courteous discussions may do so. Selfishness and its offspring, jealousy, should give way to charity and fraternal good-will among all men, not alone bee-keepers, inasmuch as the latter qualities are indispensable virtues, and the foundation of moral and intellectual progress. In the new dispensation, the first commandment is to "love thy neighbor as thyself."

I am ready to fraternally discuss matters of importance with any one, but just at present I have no time to reply to such attacks as have been

made on me in the *Review* and in the *Bee-Hive*.

Probably no man in this country has had a larger or more varied experience in the contraction of brood-chambers in the past five years than the writer, and I am a firm advocate of it in the production of comb honey, and especially for young swarms, but I think that it has been carried to extremes.

A fair swarm of bees should not be hived in a brood space less than the equivalent of six Langstroth frames, for the best results. Even with six Langstroth frames, the bees are prone to swarm out, and need to be guarded. But once established in such reduced quarters the colony will continue strong, and rarely deposit bee-bread in the sections. But six Langstroth brood-frames contain about 800 square inches of comb, and any brood-chamber having only a capacity for 700 square inches of comb, more or less, is certain to result in more or less bee-bread in the sections. In some seasons little pollen will be carried above one division of shallow hives, in others a good part of the crop is liable to be ruined by bee-bread. Five Gallup frames, although having less capacity, give less trouble than 8 shallow 5-inch frames. My greatest objection to the latter is in the size of the brood-cases; the next is the horizontal bee-space in the centre of the brood-nest in the spring, which beyond any question is an impediment to the proper extension of the brood.

As to the use of queen-excluding zinc in honey-boards, I desire to say that I was the first to so use it, and first to make it public. In its construction I have had large experience both in the manufacture of the zinc and in the various plans for its use; and have finally settled the matter to my full satisfaction that single-rowed strips of zinc used in alternation with the brood-frames is a hindrance to the working of bees in supers; and whether it is because of insufficient passage way or insufficient ventilation, I am unable to say, but both causes may be operative. At least my trials of two-rowed zinc have removed all objections to its use in honey-boards.

The two-rowed strips I use are  $\frac{3}{4}$  inch wide, and there is a margin of  $\frac{1}{8}$  to  $\frac{1}{4}$  inch for entering the saw-kerfs in the edges of the slats. The slats used may be  $\frac{1}{4}$  to  $\frac{1}{2}$  inch wide for a hive with frames spaced  $1\frac{1}{4}$  from center to center, leaving a space between the slats of 7-16 to  $\frac{1}{2}$  inch, so that we have no serious trouble from brace-combs, except where the space between the slats and top-bars of the brood-frames is over  $\frac{1}{2}$  inch.

New Philadelphia, O.

## QUEEN-REARING.

### Various Methods of Rearing Queens.

Written for the American Bee Journal  
BY THEODORE JOHNSON.

On page 252, Mr. G. Crouse asks for descriptions of queen-rearing other than by natural swarming; and on page 300, Mr. D. P. Barrows gives his method, which I have practiced very successfully, but I have now abandoned it except in extreme necessity. I have several large hives for queen-rearing, made to receive the common Langstroth frame, each hive being 15 inches wide inside, with the partitions  $\frac{1}{2}$ -inch thick, which are let into grooves so as to be easily removed if desired. This gives four apartments, each holding two full frames, and an entrance on each side of the hive.

I select the queens from which I wish to breed (I keep nothing but pure Italians), and crowd two or three with brood from colonies I do not wish to breed from, so as to induce drone-rearing. At the proper time I divide one colony, leaving the most of the brood in the hive on the old stand, but remove the hive with the queen only a few feet. When the bees have completed a number of queen-cells, I remove the whole of the balance of the frames, putting one in each of the apartments in the queen hive. I destroy all of the small queen-cells, and leave one on each of the combs; the balance of the queen-cells I cut into other combs, from other hives, and put them into other queen hives. This being done, from other hives I remove combs partly filled with brood and honey, and well covered with young bees, and put one in each of the several apartments in the queen hives; and in this way I have the warmth of a full hive, and at the same time rear four queens from selected mothers.

As soon as the old colony is thus broken up, I place the nucleus containing the old queen back on the old stand, to receive the old bees on their return. By this means I generally have from 8 to 12 young queens on hand all of the time. This year I wintered four queens in one of those hives, and have had use for two of them to supply other colonies this spring.

My bees are in excellent condition. I put 77 colonies into a bee-cellar last December, just before Christmas; and the last week in March I took 77 colonies out. Four colonies were weak, and before I attended to my duty they were robbed. I am now extracting from 5 to 10 pounds of surplus honey from each hive, leaving a large supply for June use, which is our hardest



month here. All have considerable brood, and there is drone-brood capped in several hives whose queens are only one year old. I have stimulated by feeding each day a little uncapped honey in sections. I shall keep my bees back as long as possible, as I do not care to have them increase much.

Bower, Nebr., May 3, 1888.

## SEASONABLE

### Hints About Populous Colonies and Overstocking.

Written for the Western Ploverman  
BY C. H. DIBBERN.

The balmy days have come at last, and the bees and the bee-keepers are once more busy at their accustomed work, the former gathering honey and pollen from the bloom of the apple and peach, the plum and the myriads of wild blossoms that are found in the woods, over hills and valleys during this the loveliest month of the year. Everything is now springing into life—in spring such hope as one cannot always feel in the latter months of the year. The bee-keeper can now take heart and go to work with a will, at least that is what we must do if we hope to succeed.

The apiarist of the present day must be a general. The bees are his army. He must divide them into companies, regiments, divisions. If he has two or more apiaries he may regard them as separate armies. Like the true general he should know the exact condition of his army before starting out on the season's campaign. See that every company (colony) is full, if not, be sure that the recruiting officer (queen) is doing her duty, if not, supersede her at once. Remember that on the strength and discipline of each company (colony) depends our success in the apiary as well as in war. Never mind about lines of retreat, better burn the bridges behind you and keep ever marching to the front. If you find any lions in the way, there is always a way to make a "flank movement" on them. While the bees must be allowed to roam at their own sweet will among the flowers that suit them best, gathering their delicious treasures, the bee-keeper must ever know the condition of their hives, and keep their general welfare well in hand.

Another idea has suggested itself to me, and it is that many localities had become overstocked. During prosperous years we keep on increasing the number of our colonies, while perhaps our neighbors on all sides of us are doing the same thing, as if there was no limit to the honey resources. A

bad season or two, like the last, shows us the folly of such a practice. It is far better to keep only a limited number of colonies, and they as strong as possible. Nature produces honey, like pure gold, only in limited quantities, and we must so manage with our bees that the profit does not all go for expenses.

Perhaps some of us have missed it just as badly by caring for hundreds of colonies, involving much work and expense when we could have produced just as much honey with fifty. We must remember that only a limited amount of honey is produced in any locality, and if we increase the number of our colonies out of proportion to what could gather this at a profit, we are working at a loss. As the colonies are thus increased, the quantity stored per colony is in inverse proportion to numbers of colonies kept. It will thus be seen that the bee-keeper having more bees than can find profitable work, is like the farmer trying to farm all creation. Now I would not be understood that I do not want plenty of bees, I want them by the millions, but I want them in a limited number of hives.

Milan, Ills.

## SEPARATORS.

### The Use of Wood vs. Tin Separators.

Read at the Ohio Convention  
BY DR. H. BESSE.

I suppose that all are aware that separators are used between the sections in order to obtain straight combs. I have not yet progressed far enough to find any benefit in the use of separators made either from wood or tin, although I have experimented quite extensively with both kinds; and if I should continue the use of either, I should prefer the wood, on account of cheapness. I think that separators should be discarded entirely, except, perhaps, in side-storing hives, and this I do not recommend.

I have made many experiments to get straight and true combs in sections, and have succeeded just as well without separators as with them, and thus I do away with considerable time and expense, as well as objectionable fixtures to the bees. I am of the opinion that bees will gather from 10 to 20 per cent. more honey without separators, than by their use. I am aware that in about every 30 or 40 sections, I find where separators are not used, a bulged or "fat" section that cannot be readily crated for shipment; but these I lay aside, and can find use for

all such in the family, as well as retail them to friends and neighbors.

I should have said, that one of my objections to separators is, that the bees will persist in building brace-combs from the face of the beautiful comb to the separator; this has tried my patience a great many times. This trouble exists equally with wood and tin. Since foundation has become so cheap, and in such general use, I think it entirely unnecessary to use separators of any kind when the sections are placed over the brood-chamber; but, as I have stated above, they are indispensable in a side-storing hive, and this kind of hive, in my opinion, should soon pass out of existence.

I doubt if any one could tell the difference in my comb honey that has been built between separators, or without separators, after being crated and ready for market. It is not the separators that make the nice honey.

Delaware, Ohio.

## CONVENTION DIRECTORY.

### 1888. Time and Place of Meeting.

- May 14.—Linwood, at Eau Claire, Wis.  
B. J. Thompson, Sec., Waverly, Wis.  
May 19.—Nashua, at Nashua, Iowa.  
H. L. House, Sec., Iowa.  
May 22.—N. W. Ills. & S. W. Wis., at Rockton, Ills.  
D. A. Fuller, Sec., Cherry Valley, Ills.  
May 31.—Wis. Lake Shore Center, at Kiel, Wis.  
Ferd. Zastrow, Sec., Millhome, Wis.  
Aug. 2.—Ionia County, at Ionia, Mich.  
H. Smith, Sec., Ionia, Mich.  
Aug. 14.—Colorado State, at Denver, Colo.  
J. M. Clark, Sec., Denver, Colo.  
Aug. 27.—Stark County, at Canton, O.  
Mark Thomson, Sec., Canton, O.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

## SELECTIONS FROM OUR LETTER BOX

**New Honey—Early Swarm.**—L. A. Miller, Covington, Tenn., on April 30, 1888, writes:

My bees have wintered well, out of 117 colonies only one having starved. I do not think that I ever have seen them in as good condition as they are now. Some of my colonies have stored 20 pounds each, of new honey in sections, which was put on the market on April 30. I had a swarm on April 4. White clover is beginning to bloom.

**Condition of Bees in Missouri.**—John Nebel & Son, High Hill, Mo., on May 4, 1888, write:

Bees are doing fairly well, now that we have had a week of warm weather. They came through the winter weaker, on an average, than we have known them to do in our ten years of bee-keeping. Stimulative feeding last fall would not induce queens to lay, consequently all colonies went into winter quarters with few bees, and the

most of those were old, leaving but few young bees to start and protect brood-rearing this spring, which commenced the latter part of March. We put into winter quarters on Dec. 1, 1887, 200 colonies in two cellars, where the temperature was kept at from 40° to 45°; on taking them out on March 26, we found our loss to be only 8 colonies. Bee-keepers in this vicinity, who work on the let-alone plan, have lost nearly all. There was great loss of bees in this State the past winter, and it will take several years to replace them. If we are favored with occasional rains, we may expect a surplus from clover, though the drouth of last year killed most of it, and the dry spell we had during last month, has done it a great injury. We find some clover looking exceedingly well.

**Not a Colony Lost.**—Lewis Carbino, Potsdam, N. Y., on April 26, 1888, says:

I put out my bees to-day, and found them all right. I had 42 colonies in a bee-house, and all wintered in good condition.

**Bees are Swarming.**—Mr. Jos. E. Shaver, Friedens, Va., on April 30, 1888, writes:

Bees are doing well now on fruit blossoms. I have not had any swarms yet, but one of my neighbors had a swarm yesterday, and another neighbor had a fine swarm to-day, which he saved; but the one who had the swarm yesterday, was not ready, and had to go 2½ miles to get fixtures before he could hive the bees; when he returned the bees had become tired waiting, and left for the woods. The weather is very fine now.

I have received two packages of the Chapman honey-plant seed from the Commissioner of Agriculture, and the seed of the first package is up and growing finely. A friend of mine sent for some later, and he received seed of sweet clover, or mellilot.

**Drones Flying, etc.**—Geo. W. Morris, Cornishville, Ky., on May 2, 1888, says:

I have had drones flying for three weeks, but this morning I found quite a number of them dead at the front of the hives. I suppose that the cool weather which we are having at present, is the cause. My colonies are more populous than I have ever had them this early, but the prospect for white clover is very limited at present. I have received a package of the Chapman honey-plant seed from the Commissioner of Agriculture, and will plant it in a few days. Will some one in northern Alabama inform me how it would do as a location for an apiary.

**Beginning in Bee-Keeping.**—L. W. Lighty, Mulberry, Pa., writes as follows:

"Buy black bees in box-hives, transfer them to frame hives, and Italianize them." The foregoing advice I see so frequently; I saw it in about the first bee-paper that I ever read, and to my sorrow. My experience and observation both show me that the advice is wrong. I have seen dozens of failures by following it.

I once bought 3 colonies of bees in box-hives, and as they were strong colonies, I concluded that I needed some one to help me to bring them home. I employed an old bee-keeper, with smoker, etc.; but we did not secure the bees. A few days later I had a greater bee-man to help me, with his implement, and he vowed that they must be queer bees if we could not bring them home; again we did not do it, but were stung half to death. We left those bees until winter,

in zero weather, and then had to go twice before we could conquer them. If I would have bought a colony of fine Italian bees, in a frame hive, in the beginning, I would have been better off in dollars, and would also have escaped many stings. I could then have studied the habits of the bees with more satisfaction, and less pain. I could relate the experience of others, but it would not be very instructive, as they generally gave up bee-keeping in disgust, and never tried it again. My advice is this: Buy a colony of gentle Italians in a movable-frame hive, and become acquainted with bees before you try to perform such operations as transferring or Italianizing.

**Hiving Swarms Early, etc.**—Mrs. S. E. Sherman, Salado, Tex., on April 27, 1888, says:

The prospects are very flattering here for a good honey crop. I have had 15 swarms, and would have had many more, had I not cut out queen-cells, and given the bees more room, shade and ventilation. I secured 14 of the queens in the queen-cage and drone-trap combined. There has been no climbing of trees, not a twig has been cut, and they have all been hived without any trouble. My hives are running over with bees.

**Severe Winter and Cold Spring.**—Wm. B. Ray, Alaska, Wis., on May 7, 1888, says:

Bees have wintered well here. The winter was a very severe one, with a very cold April following. There has been only two days when bees could fly.

**Late Spring—Colonies Starved.**—Charlie W. Bradish, Houseville, N. Y., on May 7, 1888, writes:

Bees have wintered in poor condition in this part of the country. It has been a very late spring, and many colonies have starved. I have just finished putting bees out; when I unite what weak colonies I have, my loss will be about one-third. The first pollen was gathered on May 5, from willows.

**The Shaking or Palsy Bee-Disease.**—N. M. Middlebrook, Patterson, Tex., on April 22, 1888, says:

My bees have been dying badly since last fall, with the shaking or palsy disease. I never saw the like before. Out of 56 colonies, 46 or 48 have the disease badly. I have lost 8 colonies, and of some of them, the ground in front of the hive has been covered every day since early last fall. Several colonies now show only a little of the symptoms of the disease. I have had several swarms.

**How the Bees have Wintered.**—O. R. Goodno, Carson City, Mich., on May 5, 1888, writes:

It is hard to guess the result of the wintering of the bees the past winter. I put 105 colonies in the cellar, and on March 19 I took out 100 colonies, and returned them the next day. On April 25 I took them out again, with six more dead ones, and many more have since died. The nights have been cold, and ice formed as thick as window-glass. More bees will die. I had out doors 28 colonies in Root chaff hives, and on March 19 three colonies were dead, and since then several more have died. The weather is too cold to try to examine them. Soft maple, elm, and a portion of the wil-

lows have past their bloom, without giving the bees a chance to visit their flowers. The few box-elders within reach of my bees are visited when it is warm enough for bees to fly. It is anything but encouraging, so far, but it reminds me of the Dutchman who bought an organ to place in his saloon to draw custom. It was effectual; he held his crowd until a late hour, when Catherine, his wife, came down stairs, and ordered the music stopped. To this Hans said: "What for you s'pose I buy that organ? Wind her up, John!" So with the bee-business—wind her up again; make it boom if possible.

**Good Honey Season Expected.**—A. R. Simpson, State Line, Ind., on May 8, 1888, says:

The prospect is favorable for a good honey season in this locality. We are having good rains each week, that will bring out white clover, which is our principal honey source.

**Cold and Backward Spring.**—Alex. Sherington, Dutton, Mich., on May 4, 1888, writes:

It has been a very cold and backward spring. When soft maple and elm was in bloom, it was so cold that the bees could not fly, but the last week of April they did very well on willows. The hard maples are blooming, and the weather is damp. The spring of 1886 I bought one colony of bees for \$8.00, increased them to 4 colonies, and took 100 pounds of comb honey in one-pound sections. The winter of 1886-87 I wintered my bees on the summer stands, packed in straw, and had no loss. Last season was a poor one, but I increased the 4 colonies to 12, by natural swarming, and obtained 150 pounds of honey from Alsike clover and linden. I had one colony that was hived on June 12, and on July 4 it had three brood-chambers full, and 88 one-pound sections of linden honey. The past winter I lost 5 colonies, and all the rest were in good condition except one, and that was very weak. On April 25 I unpacked my bees, and by changing them around, I have the weak one as strong as any. On April 27 I caught a small swarm on the fence; I took it home, hived it on 5 frames full of comb, and a frame of brood, and now I have a very fine colony.

**Results of the Season.**—Mr. Wm. Crowley, Redwood Falls, Minn., reports thus:

After putting 30 colonies in the cellar in November, 1886, I began to figure on adopting a hive and improving my strain of bees for the next season. Upon these two features, with a little care and attention, depends the crop of surplus honey. I sent to apiarists in different parts of the United States for samples of the hives they used, and also bought an extractor, and a circular saw for making hives. After the samples arrived, I examined each one carefully, and found some good points in each of them, and also some features that I did not like. It costs money to change the fixtures of a large apiary to keep up with the times. I finally constructed a hive incorporating the desirable functions of each of them, leaving out the objectionable ones, according to my opinion. I have named it the Minnesota hive. It takes a frame the same as the Langstroth hive, except the frame is 1-inch shorter; a super holding four tiers of one-pound boxes just fits on top of the hives. When spring arrived I put my bees out on April 9, a little too early. One-fourth of them were rather weak, and one queenless with a drone layer.



I Italianized my apiary, and gave my new hives a fair trial, hoping to get a crop of surplus honey. I found it a difficult job to transfer my bees and combs from old hives into new ones. I purchased two more imported queens in 1887, as I found that foreign blood introduced into my apiary had started a boom. Too much increase will lessen the crop of surplus honey, so I made only 23 swarms, worth \$5 each, \$115; 1,000 pounds of extracted honey, at 15 cents, \$150; and 500 pounds of comb honey in one-pound sections, at 20 cents, \$100. My total income was \$365. I obtained an average of 75 pounds of surplus honey per colony, spring count, and a profit of \$18.25 per colony. One colony from my choice strain of bees stored 140 pounds of comb honey in one-pound sections last summer, besides enough to winter on. The season of 1887 was poor for honey, there being only one-half of a crop in the United States, although Minnesota was better than the average. I have put in a hard winter's work making hives and fixtures, and getting ready for the season of 1888, hoping for better results than last year.

**Fine Weather for Bees.**—Leslie Stewart, Jefferson, N. Y., on May 7, 1888, writes:

My bees are in fine condition, though not removed from the cellar until April 26. They had large quantities of brood in all stages, and some young bees, when removed to the summer stands. They have wintered without loss. The weather is fine, and the bees are working for all they are worth on willow and soft maple. We have had a very late spring. White clover is in good condition, and I shall look for a grand honey crop during the season of 1888. The loss in wintering in this part of the country is about 10 per cent.

**Bee-Keeping in Nebraska.**—Geo. Gale, of Adams, Nebr., on April 27, 1888, writes:

The season of 1887 was dry, and consequently a very poor one for bees. I commenced in the spring of 1887 with 12 colonies, and 2 were robbed by the others in May. I had only one swarm, and the bees made very little above a living until September, when they stored a little surplus. I had 400 pounds of comb honey, and 100 pounds of extracted honey. One colony produced over 100 pounds of comb honey. My bees are blacks. I lost 3 colonies the past winter, but all had honey enough; one was destroyed by mice, and the others were probably queenless. Very few bee-keepers here had any increase last season, and I do not know of any that obtained more surplus honey than I did. Some of the largest and oldest bee-keepers lost more than half of their colonies last summer before the fall honey-flow commenced. I think that the bees which survived the drouth last summer, have wintered very well. The weather is as fine as could be wished for, and prospects for the season are now good. Wild plums are now in full bloom, and the bees are working on them. Our bees stored no white honey last season until late, and that was from a species of thorough-wort that grows in the timber land.

**The Convention.**—The pamphlet containing the report of the proceedings of the Union Convention in Chicago, is now published, and can be obtained at this office for 25 cents. Or bound up with the history of the International Society, and a full report of the Detroit and Indianapolis conventions, for 50 cents, postpaid.



ALFRED H. NEWMAN,  
BUSINESS MANAGER.

## Business Notices.

If You Live near one post-office and get your mail at another, be sure to give the address that we have on our list.

Hilton's new pamphlet on Comb Honey Production has been reduced in price to 5 cents. For sale at this office.

If you Lose Money by carelessly enclosing it in a letter, it is without excuse, when a Money Order, which is perfectly safe, costs but 5 cents.

Please to get your Neighbor, who keeps bees, to also take the AMERICAN BEE JOURNAL. It is now so cheap that no one can afford to do without it.

Preserve Your Papers for future reference. If you have no BINDER we will mail you one for 60 cents; or you can have one FREE, if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

Yucca Brushes, for removing bees from the combs, are a soft, vegetable fiber, and do not irritate the bees. We supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

Please write American Bee Journal on the envelope when writing to this office. Several of our letters have already gone to another firm (a commission house), causing vexatious delay and trouble.

Home Markets for honey can be made by judiciously distributing the pamphlets, "Honey as Food and Medicine." Such will create a demand in any locality at remunerative prices. See list on the second page of this paper.

**Photographs of Bee-Keepers.**—The "medley" gotten up by E. O. Tuttle, containing the faces of 131 representative apiarists, and a printed sketch of each one, will be sent with the BEE JOURNAL for one year for \$1.75; or we will present it free, by mail, to any one, for a club of three subscribers and \$3.00.

**Apiary Register.**—All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and begin to use it. The prices are as follows:

For 50 colonies (120 pages).....	\$1 00
" 100 colonies (220 pages).....	1 25
" 200 colonies (420 pages).....	1 50

## Honey and Beeswax Market.

### DETROIT.

HONEY.—Best white in one-pound sections, 15c. Extracted, 7c@10c. Large supply and few sales.  
BEESWAX.—23c@24c.  
Apr. 24. M. H. HUNT, Bell Branch, Mich.

### CHICAGO.

HONEY.—Prices range from 15c@16c. for best one-lb. sections; other grades are slow, at lower prices. Extracted, 7c@8c. Light demand, and supply larger than usual at this season of the year.  
BEESWAX.—23c.  
May 1. H. A. BURNETT, 161 South Water St.

### NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, 14c@15c.; fancy 2-lbs., 13c. Lower grades 12c. per lb. less. Buckwheat 1-lb., 10c@10½c.; 2-lb., 9c@9½c. Extracted, white, 7c@7½c.; dark, 5c@5½c.  
Mar. 10. F. G. STROHMMEYER & CO., 123 Water St.

### CHICAGO.

HONEY.—We quote: Fancy white clover 1-lb., 16c@17c.; 2-lb., 15c@16c. Dark is slow sale at almost any price. Extracted is scarce, and sells at 7c@10c.  
BEESWAX.—23c.  
Mar. 13. B. T. FISH & CO., 189 S. Water St.

### CINCINNATI.

HONEY.—We quote extracted at 4c@5c. per lb., for which demand is good. Comb honey, 14c@17c.—Demand slow.  
BEESWAX.—Demand is good—20c@22c. per lb. for good to choice yellow, on arrival.  
Apr. 23. C. F. MUTH & SON, Freeman & Central Av.

### MILWAUKEE.

HONEY.—Choice white one-lb. sections, 10c@17c.; 2-lbs., 15c@16c.; 3-lbs., 14c. Extracted, white in bags and ½-barrels, 8 to 9c.; in tin and pails, 9c@10c.; dark in barrels and kegs, 5c@7c. Market fair.  
BEESWAX.—22c@25c.  
Apr. 23. A. V. BISHOP, 142 W. Water St.

### DENVER.

HONEY.—Best white 1-lb. sections, 17c@19c.; 2-lb. sections, 15c@17c. Extracted, 7c@10c.  
BEESWAX.—20c@23c.  
Mar. 1. J. M. CLARK & CO., 1409 Fifteenth St.

### KANSAS CITY.

HONEY.—We quote: Choice white 2-lb. sections, 17c@18c.; dark 2-lbs., 14c@15c.; choice white 1-lb., 15 to 20 cts.; dark 1-lb., 15c@16c. White extracted, 7c@8c.; dark, 5c@6c. Demand is slow. White extracted is firm when in 60-lb. tin cans.  
BEESWAX.—21 to 22c.  
Mar. 23. HAMBLIN & BEARDS, 514 Walnut St.

### BOSTON.

HONEY.—We quote: 1-lb. sections, 16c@17c.; 2-lb. sections, 14c@16c. Extracted, 5c@6c. The market is not very brisk and sales are slow.  
BEESWAX.—25 cts. per lb.  
Mar. 24. BLAKEN & KIPLEY, 57 Chatham Street.

### SAN FRANCISCO.

HONEY.—We quote: White to extra, 10c@17c.; amber, 9c@14c. Extracted, white liquid, 7c@7½c.; amber and candied, 6c@7c. Market quiet.  
BEESWAX.—18c@21c.  
Mar. 20. SCHACHT & LEMCKE, 129-134 Davis St.

### KANSAS CITY.

HONEY.—We quote: White 1-lb., glassed, 16c@17c.; unglazed, 17c@18c.; and dark 1-lb., glassed, 15c.; unglazed, 16c.; white 2-lb., glassed, 16c.; unglazed 2-lb., 17c. California white 2-lb., 17c. California extracted in 60-lb. cans, 8c. Market quiet and receipts are larger.  
BEESWAX.—No. 1, 20c.; No. 2, 18c.  
Mar. 10. CLEMONS, CLOON & CO., cor 4th & Walnut.

Your Full Address, plainly written is very essential in order to avoid mistakes.

New Subscribers can obtain the full numbers for 1887 and 1888, for \$1.75, while there are any sets of 1887 left.

**Clover Seeds.**—We are selling *Alsike* Clover Seed at the following prices: \$8.00 per bushel; \$2.25 per peck; 25 cents per lb. *White Clover Seed*: \$10.00 per bushel; \$2.75 per peck; 30 cents per lb. *Sweet, or Melilot, Clover Seed*: \$6.00 per bushel; \$1.75 per peck; 20 cents per lb.—by express or freight.

**A Pocket Dictionary** will be presented for two subscribers with \$2.00. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

**Red Labels for Pails.**—We have three sizes of these Labels ranging in size for pails to hold from one to ten pounds of honey. Price, \$1 for a hundred, with the name and address of the bee-keeper printed on them. Smaller quantities at one cent each; but we cannot print the name and address on less than 100. Larger quantities according to size, as follows:

	Size A.	Size B.	Size C.
250 Labels.....	\$1.50	\$2.00	\$2.25
500 Labels.....	2.00	3.00	3.50
1,000 Labels.....	3.00	4.00	5.00

✂ Samples mailed free, upon application.

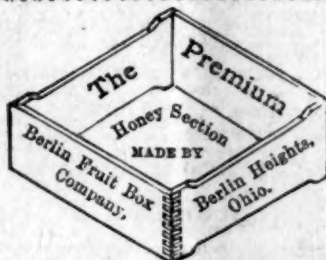
**Alfalfa Clover.**—For habits and cultivation of this honey-plant, see page 245. We supply the seed at the following prices: —Per lb., 22c.; per peck, \$3.00; per half-bushel, \$5.50; per bushel of 60 lb., \$10.00. If wanted by mail, add 18 cents per pound for bag and postage.

**A Modern BEE-FARM,** and its Economic Management; showing how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man. By S. Simmins. For sale at this office. Price, \$1.

**We Supply Chapman Honey-Plant SEED** at the following prices: One ounce, 40 cents; 4 ounces, \$1; ½ pound, \$1.75; 1 pound, \$3. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

**Paper Boxes**—to hold a section of honey for retail dealers. We have two sizes on hand to carry sections 4¼x4¼ and 5¼x5¼. Price, \$1.00 per 100, or \$8.50 per 1,000.

## Advertisements.



**OUR No. 2 One-Piece Sections** are the cheapest in use—\$2.60 per M. No. 1 are the best in use—\$3.00. These are 4¼x4¼, of various widths. Address as in cut. 20A4t

Mention the American Bee Journal.

## FOR SALE.

**35 COLONIES** of Italian Bees in Langstroth hives made frost-proof. Apply to, 20A2t PETER DIXON, Saginaw, Mich.

Mention the American Bee Journal.

**ITALIANS** on Langstroth frames—Two-frame Nucleus (no Queen) \$1.75; 3-frame, \$1.75. Each Nucleus to contain frames filled with brood and a plenty of bees. Orders filled promptly. **TESTED QUEENS**, \$2.00; Untested, after May 20, \$1. **BEES** per Pound, after May 20, 65 cents. Safe arrival and satisfaction guaranteed. No foul brood.

19A4t H. L. Pangborn, Maquoketa, Iowa.

Mention the American Bee Journal.

**Dadants' Foundation Factory**, wholesale and retail. See advertisement in another column.

## The Bee-Keepers' Review

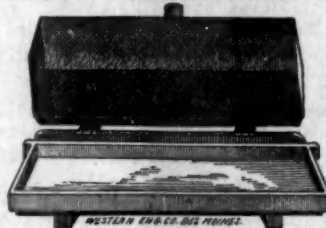
**FOR MAY** is now out. Having regained the time lost during his illness, the editor will hereafter take pride in getting out the Review promptly on the 10th of each month. The special topic of the present Number is "Hiving Bees." The review of Mr. Cheshire's work, which was begun in the March No., is finished in the present issue. We have a surplus of the Numbers containing this review, and, so long as they last, these three Numbers will be sent free to all who apply.

✂ Price of the REVIEW, 50 cts. a year.

### The Production of Comb Honey,

A neat little Book of 45 pages, price 25 cents. The REVIEW and this book for 65 cents. Stamps taken, either U. S. or Canadian.

Address, **W. Z. HUTCHINSON,**  
20A4t 613 Wood St., FLINT, MICHIGAN.  
Mention the American Bee Journal.



WESTERN END CO. BROOD FRAME.  
(Patent applied for).

**BEST FOUNDATION FASTENER** for Brood-Frames and Sections. Description and Illustration sent free on application.

J. W. BITTENBENDER,  
20E4t KNOXVILLE, Marion Co., IOWA.

## 7 per cent. OFF

**ON SECTIONS**, from prices given in price-list. We make four grades of COMB FOUNDATION—Heavy Brood, Light Brood, Thin & Extra Thin for Sections.

✂ Send for free Price-List and Samples.—Dealers, write for special prices.

Address, **M. H. HUNT,**  
Bell Branch, Wayne Co., Mich. (near Detroit).  
2E4t

Mention the American Bee Journal.

**SAMPLE COPIES** of the AMERICAN APICULTURIST and our Price-List of Winter Strain of Pure Italian Bees sent free. Address,  
18E4t APICULTURIST, Wrenham, Mass.

### OUR ILLUSTRATED

## CATALOGUE FOR 1888

**WILL** be mailed free to any one who is not already supplied with it. Send us your address, plainly written, on a Postal Card.

**THOS. G. NEWMAN & SON,**  
923 & 925 W. Madison-St., - CHICAGO, ILLS.

## HOW TO RAISE COMB HONEY,

**PAMPHLET** full of new and improved methods; Price, 5 one-cent stamps. You need also my list of Italian Queens, Bees by the lb., and Supplies. **OLIVER FOSTER,**  
13A4t Mt. Vernon, Linn Co., Iowa.

## WANTED,

**Beeswax.**—We will pay 20 cents per pound, delivered here, for Yellow Beeswax. To avoid mistakes, the name of the shipper should always be on each package.

**THOS. G. NEWMAN & SON,**  
923 & 925 West Madison St., - CHICAGO, ILLS.

## SMITH & SMITH

We have one of the largest

### Bee-Hive Factories in the World.

✂ If you are interested in BEES, send for our Price-List—Free. Good GOODS, and fair Prices. Address, **SMITH & SMITH,**  
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## BEE-SUPPLIES, RETAIL AND WHOLESALE.

The Largest Steam-Power Shops in the West; exclusively used to make Everything needed in the Apiary, of practical construction and at Lowest Prices. Italian Bees, Queens, 12 styles of Bee-Hives, Sections, Honey-Extractors, Bee-Smokers, Bee-Feeders, Comb Foundation, and everything used by Bee-Keepers always on hand. My illustrated Catalogue FREE. **E. Kretschmer,**  
16E4t Coburg, Iowa.

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## THE NEW HEDDON HIVE

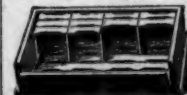
NAILED AND PAINTED.

**WE** have a FEW of the above hives, all complete, for sale, at \$4.00 each. As we do not handle these hives this year, we cannot fill orders for them in the flat. Those nailed and painted are left from last year's stock.

**THOS. G. NEWMAN & SON,**  
923 & 925 West Madison-Street, - CHICAGO, ILLS.

**100 COLONIES** of Italian and Hybrid Bees for Sale at bottom prices. Also, JAPANESE BUCKWHEAT for Seed. It has a profuse bloom and is wonderfully productive. Write for prices. **A. J. & E. HATFIELD,**  
14E4t SOUTH BEND, IND.

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Eaton's Improved SECTION-CASE. BEES & QUEENS. Send for free catalogue. Address **FRANK A. EATON,**  
7E4t BLUFFTON, OHIO.

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## ITALIAN BEES and QUEENS.

**ONE** Untested Queen, \$1.00; 3 for \$2.00. BEES by the Pound and Nucleus. Send for Price-List. Address, **H. G. FRAME,**  
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**FRIENDS:** I have QUEENS in my Apiary as fine and as good as you can import to the free land of America. My Bees equal any that ever spread wing 'neath the sunny skies of Italy. You have but to try them and be convinced. Untested, \$1; Tested, \$2; Select Tested, \$2.50; Standard Breeders, \$3.00. BEES by the lb., \$1; Frame of Brood, 75 cts.

**R. H. CAMPBELL,** (Lock Box 215).  
12E12t MADISON, Morgan Co., GEORGIA.

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## 2-Story Langstroth Hive, 80c.

**WE** still have a few of those Two-Story Langstroth HIVES with 10 Brood-Frames, at 80 cents.

Who wants them? Speak QUICK, or it will be too late. Address,

**SMITH & SMITH,**  
10E4t KENTON, Hardin Co., OHIO.

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**LOOK HERE!** If You Think of giving Paper Box a trial the coming season, send for Circular and Prices of these, and other BEE-SUPPLIES. If you wish to have your honey crop in the best shape for market, do not fail to send me your address (written plainly) on a postal card. **A. M. GANDEB,**  
14E4t (Box 591), ADRIAN, MICH.

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